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23. (Amended) A method of controlling a visual display on a computer display device based on an input from a computer input device, the method comprising:

receiving orientation information indicative of a physical orientation of the computer input device;

receiving switch information indicative of a configuration of a multiple-switch device <u>located</u> on the computer input device <u>and having at least two degrees of motional freedom</u>; — Tyler

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receiving mode information indicative of a selected mode of operation; and

controlling the display device such that an object being displayed on the visual display device assumes a visual orientation corresponding to one of, the physical orientation of the computer input device as indicated by the orientation information and the configuration of the multiple-switch device as indicated by the switch information, based on the selected mode.

<u>REMARKS</u>

This is in response to the Office Action mailed on October 4, 2000. Claims 1-23 were pending in the application, and the Examiner rejected all claims. With this amendment, claims 1, 10, 16, 21 and 23 are amended, and the remaining claims are unchanged in the application.

On page 2 of the Office Action, the Examiner objected to claim 10 for improperly demonstrating dependency on itself. In the current action, claim 10 has been amended to eliminate dependency on itself and to create a proper and intended dependency on claim 1. Applicant respectfully submits that claim 10 no longer contains an improper dependency.

In the middle of page 3 of the Office Action, and through the top of page 5 of the Office Action, the Examiner

rejected claims 1-19 and 23 under 35 U.S.C. §103(a) as being unpatentable over Ulrich et al. (U.S. 5,396,265) and further in view of Beasley et al. (U.S. 5,721,842).

The Ulrich et al. reference teaches a computer input device having tactile and spatial input capabilities (column 4, lines 17-20). The tactile input corresponds to the fact that the device includes two body halves that may be rotated or translated relative to one another (column 5, lines 8-10). The spatial inputs of the device correspond to the fact that each body half contains several momentary switches and several push-buttons that enable a user to select and perform desired functions (column 4, line 68-column 5, line 3).

The Beasley et al. reference teaches a computerized switching system for coupling a work station to a remotely located computer, wherein a data packet containing information relating to the operation of a computer keyboard and mouse is created (abstract and column 5, lines 30-42). Applicant assumes, based on the Examiner's comments on pages 2 and 3 of the Office Action, that the Beasley et al. reference was cited in the proposed combination for its utilization of data packet signal transmission.

It is respectfully submitted that independent claim 1 claims an invention that includes features that are neither taught nor suggested by either the Ulrich et al. reference or the Beasley et al. reference or a combination of those references. Claim 1 has been amended to emphasize what Applicant believes are significant differences between the invention of claim 1 and the teachings of the cited references. Specifically, claim 1 is directed toward a method of preparing a data packet indicative of operator manipulation of a hand-held computer input device. According to the claimed method, information indicative of a physical orientation of the input device is received and placed in the data packet. Also in accordance with the claimed method,

information indicative of a configuration of a multiple-switch device located on the computer input device and having at least two degrees of motional freedom is received and placed within the data packet along with the device configuration information.

The specification of the current application describes a multiple-switch device as being "a direction pad or hat switch" (page 6, lines 4-5). It is respectfully pointed out that both of these devices have at least two degrees of motional freedom. In addition, specific examples in the specification illustrate the incorporation of multiple-switch devices having multiple degrees of motional freedom into the current invention (page 18, line 19-page 19, line 12).

It is respectfully submitted that the momentary switches and push-buttons incorporated into the Ulrich et al. input device do not meet the limitation of the multiple-switch device described in claim 1. It is also respectively submitted that the Beasley et al. reference fails to teach or suggest preparing a data packet that includes information indicative of an input device orientation and information indicative of a multiple-switch device as defined in claim 1. It is further submitted that these features that appear in claim 1 but do not appear in the cited references are consistent with the spirit and purpose of the current invention as described in the background section and elsewhere in the specification of the current application. In particular, claim 1 provides a solution that is particularly beneficial to input devices having multiple inputs with multiple degrees of freedom. The proposed combination provides no benefit to such devices.

It is respectfully submitted that the above distinctions between the claim 1 method and the teachings of the cited references signify non-obvious and patentable improvements. Accordingly, Applicant respectfully submits that claim 1 is allowable in its present form. It is also submitted that claims

2-12, which depend on claim 1, are similarly distinguishable from the cited references and should also be allowable in their present form. Applicant respectfully solicits allowance of these claims.

Independent claim 13 is also directed toward a method of preparing a data packet indicative of operator manipulation of a handheld computer input device. The method of claim 13, similar to the method of claim 1, includes receiving information indicative of computer input device orientation and placing the information in the data packet. In contrast to claim 1, however, claim 13 includes receiving rotation information indicative of rotation of a rotatable member on the computer input device and placing the information in a location within the data packet.

On page 3 of the Office Action, the Examiner cited column 5, lines 8-35 of the Ulrich et al. reference as including the features of claim 13. This portion of the Ulrich et al. reference, however, describes an input device having two body halves that may be rotated or translated relative to one another. It is respectfully submitted that this is the only rotating portion of the Ulrich et al. input device and that the same rotating motion is the source of the devices ability to change physical orientations. In other words, the Ulrich et al. input device does not include the ability to change device orientations in addition to a separate or independent rotatable member. Accordingly, it is respectfully submitted that the Ulrich et al. reference, even in combination with the Beasley et al. reference, fails to teach or suggest a method of preparing a data packet that includes a field for storing information indicative of device orientation in addition to a field for storing information indicative of the rotation of a rotatable member.

For these reasons, Applicant respectfully submits that claim 13 is allowable in its present form. Accordingly, it is also submitted that claims 14 and 15, which depend on claim 13,

are similarly distinguishable from the cited references and should also be allowable in their present form. Applicant respectfully solicits allowance of these claims.

Independent claim 16, as the Examiner pointed out on page 3 of the Office Action, is similar to claim 1. Accordingly, Applicant respectfully submits that claim 16 can be distinguished from the cited references with similar reasoning. Claim 16 has been amended to better clarify what Applicant believes are significant differences between the data structure of claim 16 and the teachings of the cited references. Specifically, claim 16 has been amended to emphasize that claim 16 is directed toward a data structure having an orientation field containing information indicative of a pitch and roll physical orientation of a computer input device and a switch field containing information indicative of a multiple-switch device located on the computer input device and having at least two degrees of motional freedom.

It is respectfully pointed out that the Ulrich et al. device includes momentary switches and push-buttons, but does not include a multiple-switch device located on the input device. Further, nothing in the Ulrich et al. reference teaches or suggests that pitch and roll orientation are even sensed, much less incorporated in a data structure. It is respectfully submitted that a data structure generated by the Ulrich et al. device would include, at best, information indicative of the two halves relative to one another and information indicative of the status of momentary switches and push-buttons. Neither the Ulrich et al. reference nor the Beasley et al. reference teach or suggest a data structure that includes a switch field similar to the one claimed in claim 16.

Accordingly, it is respectfully submitted that the above distinctions between the claim 16 data structure and the teachings of the cited references signify non-obvious and

patentable improvements. For these reasons, Applicant respectfully submits that claim 16 is allowable in its present form. Accordingly, it is also submitted that claims 17-19 which depend on claim 16, are similarly distinguishable from the cited references and should also be allowable in their present form. Applicant respectfully solicits allowance of these claims.

Independent claim 23 has been amended to better clarify what Applicant believes are significant differences between the method of the claim and the teachings of the cited references. Applicant respectfully submits that claim 23, in accordance with the reasoning outlined above in relation to claims 1 and 16, teaches an input device that incorporates both information indicative of the physical orientation of the device and information indicative of a configuration of a multiple-switch device located on the input device and having at least two degrees of motional freedom. In addition, another significant difference between the teachings of claim 23 and the teachings of the cited references is that claim 23 teaches a method of controlling a visual display wherein the object being displayed assumes a visual orientation corresponding to either the physical orientation of the computer input device or the configuration of the multiple-switch device. It is respectfully submitted that neither the Ulrich et al. reference nor the Beasley et al. reference teach this feature of claim 23.

Accordingly, it is respectfully submitted that these distinctions between the claim 23 method and the teachings of the cited references signify non-obvious and patentable improvements. For this reason, Applicant respectfully submits that claim 23 is allowable in its present form. Applicant respectfully solicits allowance of this claim.

On page 5 of the Office Action, the Examiner rejected claims 20-22 under 35 U.S.C. §103(a) as being unpatentable over

Ulrich et al. and Beasley et al., and further in view of Willner et al. (U.S. 5,874,906).

Independent claim 20 is directed to a computer input device having a first housing portion with first and second extending handles coupled to and extending therefrom. The Examiner, in the rejection on page 5 of the Office Action, points to Willner et al. as teaching or suggesting these characteristics of claim 20. It is respectfully submitted that the references cited by the Examiner could not be combined and still incorporate all of the features of claim 20. In particular, claim 20 is directed toward a ("a" underlined to emphasize the lack of plurality) first housing portion with first and second extending handles coupled to and extending therefrom. It is respectfully pointed out that the extending handles (114 and 116) of the Willner et al. device could not be incorporated into the Ulrich et al. device and still be handles to a single housing portion, as is taught by claim 20. The nature of the Ulrich et al. device is such that it must include two separate housing portions hinged to one another (column 5, lines 8-16). In addition, placement of the Willner et al. extending handles on a single body portion (12 or 14) of the Ulrich et al. device would defeat the ergonomic and functional purposes of having handles.

Accordingly, it is respectfully submitted that the devices taught by the cited references, if combined, would not include the features of claim 20. For this reason, Applicant respectfully submits that claim 20 is allowable in its present form. Accordingly, it is also submitted that claims 21 and 22, which depend on claim 20, should also be allowable in their present form.

In addition, it is also respectfully pointed out that dependent claim 21, as amended, includes features similar to independent claim 1 and independent claim 16, and can therefore be similarly distinguished from the Ulrich et al. reference and

the Beasley et al. reference. In addition, because dependent claim 22 includes features similar to claim 13, for reasons outlined above in reference to claim 13, claim 22 can be distinguished from these two cited references. Finally, it is respectfully submitted that the Willner et al. reference fails to teach or suggest the features of claims 21 and 22 that are missing from the Ulrich and Beasley et al. references, and the Examiner has not contended otherwise. For this reason, Applicant respectfully solicits allowance of claims 21 and 22.

In conclusion, Applicant submits that independent claims 1, 16 and 23, as amended, and independent claims 13 and 20 are allowable over the references cited by the Examiner. Therefore, Applicant submits that dependent claims 2-12, 14-15, 17-19, and 21-22, which depend from the independent claims are also allowable. Reconsideration and allowance of all pending claims, 1-23, are respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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